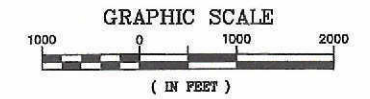
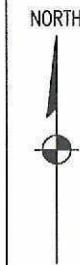


GVR South Sewer System Model  
Manhole ID Map  
Pipe ID Map

# GOLDEN VALLEY RANCH WATER AND SEWER MASTER PLAN



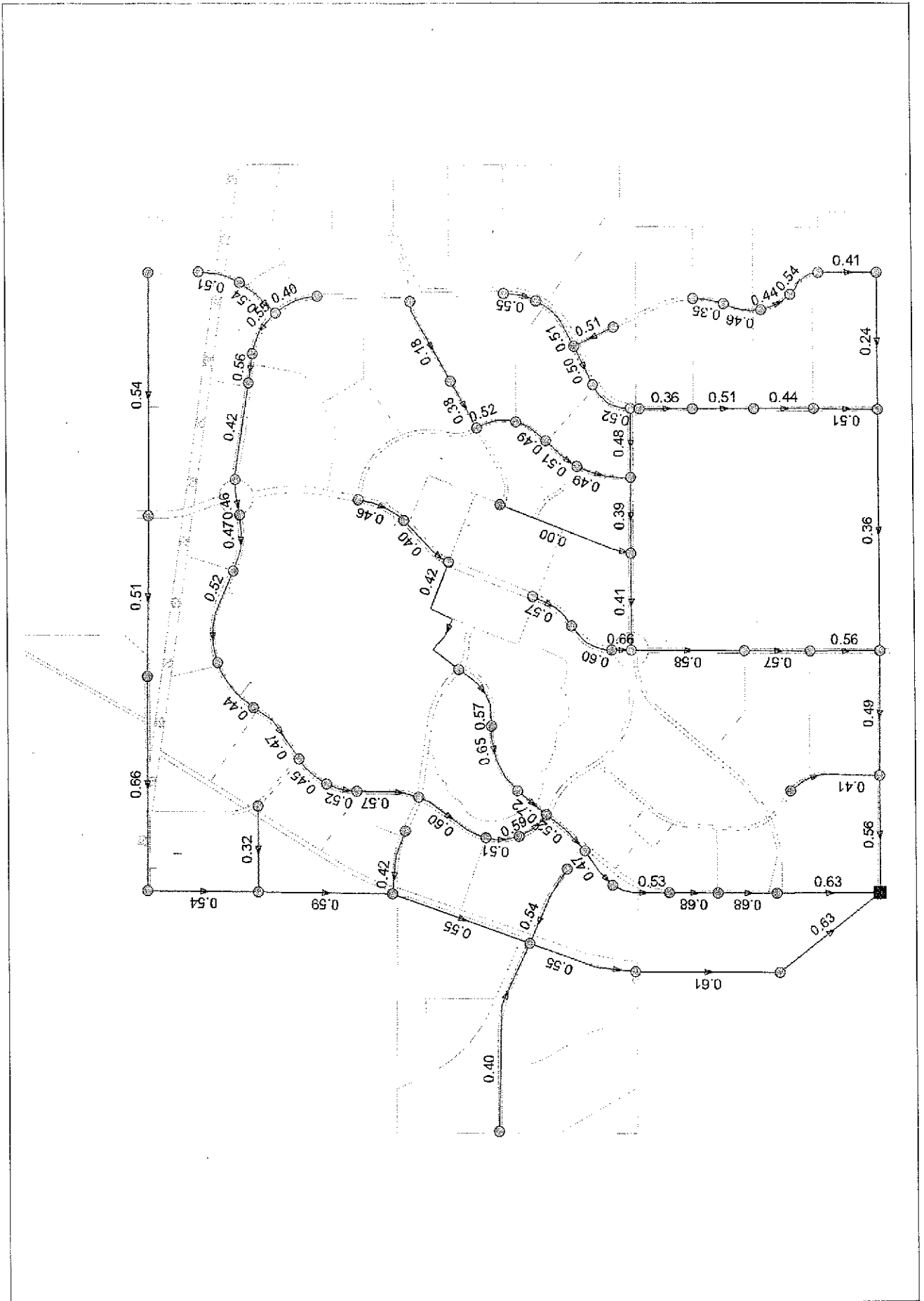
## LEGEND

- STREETS
- PARCEL LINE
- SITE BOUNDARY
- H2O MAP SEWER ID
- H2O MAP MANHOLE ID
- TREATMENT PLANT

FIGURE E-1  
NODE AND LINK ID MAP  
H2O MAP SEWER

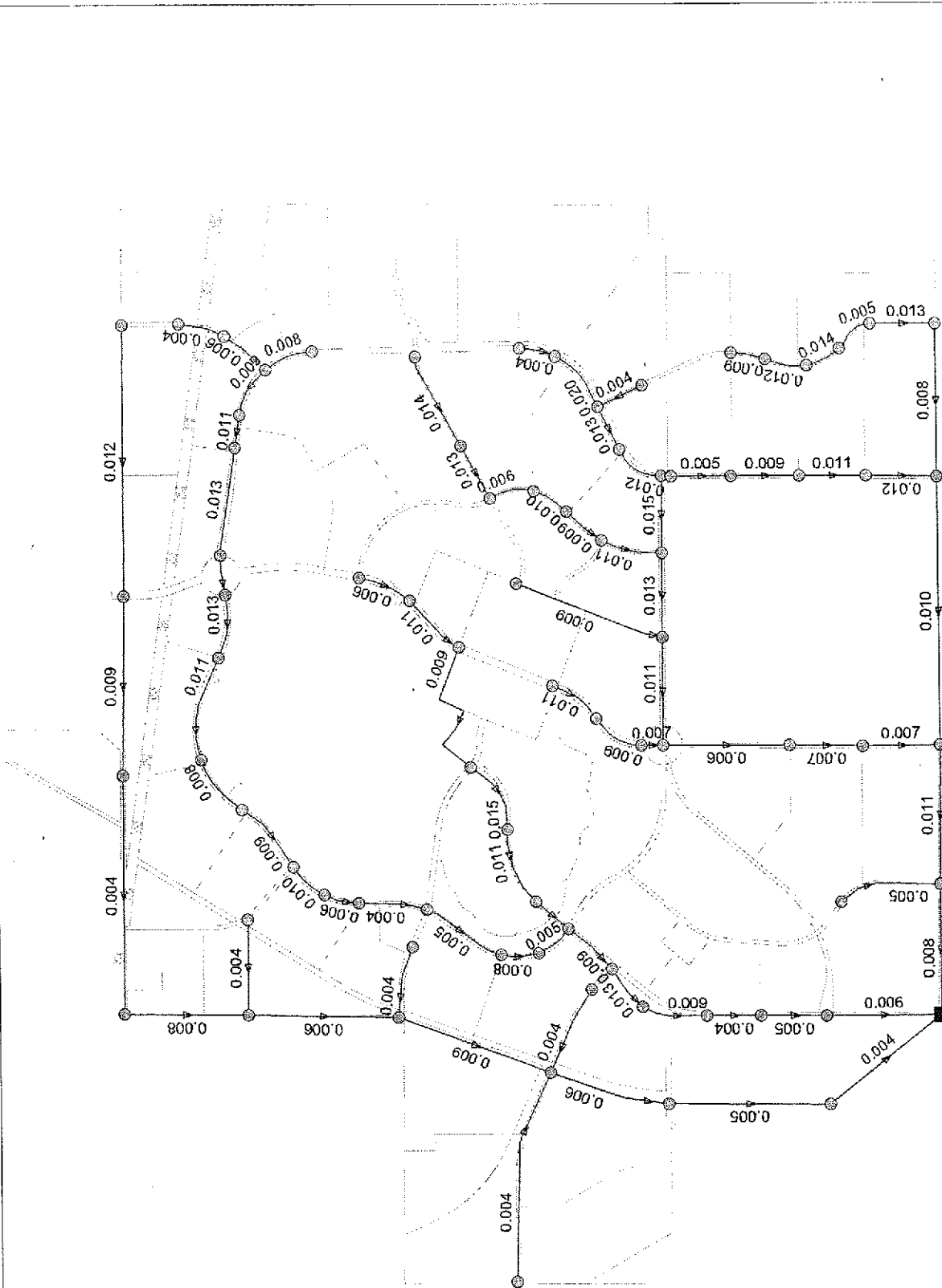
FEB 2006

# Golden Valley Ranch Sewer Model - Depth to Diameter (d/D) Ratio for Peak Hour Contributions





# Golden Valley Ranch Sewer Model - Pipe Slopes



# GVR South Sewer System Model Peak Hour Contributions

## Golden Valley South Sewer System - Peak Hour Pipe Report

ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Total Flow (mgd)	Velocity (ft/s)	d/D
101	104	108	10	1101	0.020	1.044	5.752	0.512
103	108	110	12	931	0.013	1.308	5.160	0.500
105	110	112	12	1032	0.012	1.308	4.962	0.515
107	112	100	12	1509	0.015	1.308	5.495	0.476
109	100	114	18	1654	0.013	2.454	5.978	0.389
11	10	12	21	1783	0.008	5.115	6.026	0.536
111	114	82	18	2106	0.011	2.454	5.652	0.405
113	82	116	21	2462	0.006	5.154	5.478	0.583
115	116	118	21	1432	0.007	5.355	5.822	0.572
117	118	120	21	1512	0.007	5.355	5.914	0.565
119	120	122	24	2718	0.011	7.533	7.638	0.489
121	122	150	24	2554	0.008	7.992	6.845	0.559
123	124	126	8	669	0.009	0.195	2.770	0.350
125	126	128	8	831	0.012	0.372	3.672	0.460
127	128	130	8	733	0.014	0.372	3.847	0.444
129	130	132	10	816	0.005	0.561	2.905	0.538
13	12	158	21	3566	0.006	5.430	5.668	0.592
131	132	134	10	1269	0.013	0.561	4.127	0.410
133	134	136	18	2983	0.008	0.756	3.693	0.235
135	136	120	18	5260	0.010	1.953	5.192	0.364
137	138	140	8	1157	0.005	0.156	2.137	0.360
139	140	142	8	1331	0.009	0.384	3.322	0.510
141	142	144	10	1302	0.011	0.600	3.965	0.444
143	144	136	10	1394	0.012	0.813	4.490	0.511
145	146	108	8	964	0.004	0.264	2.262	0.514
147	152	154	8	4220	0.004	0.174	2.050	0.402
149	158	154	21	3151	0.009	5.610	6.364	0.553
15	14	12	8	1342	0.004	0.108	1.711	0.323
151	156	158	8	1734	0.004	0.180	2.027	0.416
153	74	52	10	3095	0.009	0.486	3.470	0.419
155	154	160	24	2411	0.006	6.462	5.700	0.546
157	160	162	24	3143	0.005	6.972	5.381	0.609
159	162	150	24	2805	0.004	6.972	5.147	0.633
161	164	122	10	2045	0.005	0.351	2.574	0.411
163	166	114	8	3052	0.009	0.000	0.000	0.000
17	18	16	18	1524	0.009	2.802	5.345	0.468
171	174	56	15	1574	0.011	3.399	6.213	0.651
173	52	174	15	1503	0.015	3.186	6.860	0.567
175	176	154	8	1821	0.004	0.294	2.371	0.539
177	178	180	12	5302	0.012	1.472	5.217	0.544
179	180	182	18	3501	0.009	3.430	5.839	0.511
183	182	10	21	4662	0.004	4.902	4.525	0.657
19	20	18	18	1276	0.008	2.451	5.006	0.444
21	22	20	15	2093	0.011	2.274	5.488	0.518
23	24	22	15	1256	0.013	2.160	5.823	0.475
25	26	24	15	782	0.013	2.088	5.782	0.465
27	28	26	15	2132	0.013	1.785	5.605	0.422
29	30	28	12	650	0.011	1.434	4.928	0.558
31	32	30	12	1050	0.009	1.245	4.373	0.548
33	34	32	8	1005	0.008	0.240	2.872	0.397

## Golden Valley South Sewer System - Peak Hour Pipe Report

ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Total Flow (mgd)	Velocity (ft/s)	d/D
35	36	38	12	936	0.004	0.777	2.994	0.509
37	38	32	12	1037	0.006	1.005	3.578	0.542
39	16	40	18	824	0.010	2.802	5.610	0.451
41	40	42	18	683	0.006	2.802	4.641	0.522
43	42	44	18	1343	0.004	2.802	4.190	0.567
45	44	46	18	1708	0.005	3.168	4.388	0.604
47	46	48	18	738	0.008	3.168	5.413	0.510
49	48	50	18	776	0.005	3.168	4.555	0.586
55	56	50	15	821	0.010	3.600	5.865	0.723
57	50	58	24	1162	0.009	7.305	6.822	0.521
59	58	60	24	960	0.013	7.458	7.885	0.473
61	60	62	24	1273	0.009	7.662	7.023	0.529
63	62	64	24	1054	0.004	7.764	5.258	0.683
65	64	66	24	1282	0.005	8.046	5.493	0.678
67	66	150	24	2252	0.006	8.130	5.991	0.634
69	70	72	10	1089	0.006	0.486	3.100	0.457
71	72	74	10	1331	0.011	0.486	3.716	0.398
75	76	78	15	1089	0.011	2.700	5.826	0.566
77	78	80	15	1066	0.009	2.700	5.470	0.597
79	80	82	15	428	0.007	2.700	4.877	0.658
85	86	90	10	1864	0.014	0.117	2.737	0.179
87	90	92	10	1167	0.013	0.486	3.997	0.377
89	92	94	12	898	0.006	0.921	3.449	0.521
91	94	96	12	773	0.010	1.146	4.601	0.493
93	96	98	12	880	0.009	1.146	4.379	0.512
95	98	100	12	1217	0.011	1.146	4.654	0.488
97	102	104	10	737	0.004	0.534	2.674	0.552

## Golden Valley South Sewer System - Peak Hour Manhole Report

ID	Rim Elevation (ft)	Base Flow (mgd)	Total Flow (mgd)	Grade (ft)	Status
10	2,524.00	0.213	0.213	2,508.94	Not Full
100	2,541.00	0.000	0.000	2,535.58	Not Full
102	2,611.00	0.534	0.534	2,605.46	Not Full
104	2,610.00	0.510	0.510	2,604.43	Not Full
108	2,592.00	0.000	0.000	2,582.50	Not Full
110	2,576.00	0.000	0.000	2,570.52	Not Full
112	2,564.00	0.000	0.000	2,558.48	Not Full
114	2,520.00	0.000	0.000	2,514.61	Not Full
116	2,480.00	0.201	0.201	2,477.00	Not Full
118	2,472.00	0.000	0.000	2,466.99	Not Full
12	2,500.00	0.207	0.207	2,495.04	Not Full
120	2,461.00	0.225	0.225	2,455.98	Not Full
122	2,430.00	0.108	0.108	2,425.12	Not Full
124	2,586.00	0.195	0.195	2,580.23	Not Full
126	2,580.00	0.177	0.177	2,574.31	Not Full
128	2,570.00	0.000	0.000	2,564.30	Not Full
130	2,560.00	0.189	0.189	2,554.45	Not Full
132	2,556.00	0.000	0.000	2,550.34	Not Full
134	2,540.00	0.195	0.195	2,534.35	Not Full
136	2,515.00	0.384	0.384	2,509.55	Not Full
138	2,562.00	0.156	0.156	2,556.24	Not Full
14	2,505.00	0.108	0.108	2,499.22	Not Full
140	2,558.00	0.228	0.228	2,552.34	Not Full
142	2,546.00	0.216	0.216	2,540.37	Not Full
144	2,532.00	0.213	0.213	2,526.43	Not Full
146	2,592.00	0.264	0.264	2,586.34	Not Full
152	2,468.00	0.174	0.174	2,462.27	Not Full
154	2,456.00	0.384	0.384	2,445.09	Not Full
156	2,484.00	0.180	0.180	2,478.28	Not Full
158	2,478.00	0.000	0.000	2,471.97	Not Full
16	2,501.00	0.000	0.000	2,495.68	Not Full
160	2,436.00	0.510	0.510	2,431.22	Not Full
162	2,421.00	0.000	0.000	2,416.27	Not Full
164	2,440.00	0.351	0.351	2,434.34	Not Full
166	2,548.00	0.000	0.000	2,542.00	Not Full
174	2,492.00	0.213	0.213	2,486.81	Not Full
176	2,456.00	0.294	0.294	2,452.36	Not Full
178	2,630.00	1.472	1.472	2,624.54	Not Full
18	2,514.00	0.351	0.351	2,508.70	Not Full
180	2,565.00	1.958	1.958	2,559.77	Not Full
182	2,533.00	1.472	1.472	2,527.15	Not Full
20	2,524.00	0.177	0.177	2,518.67	Not Full
22	2,546.00	0.114	0.114	2,540.65	Not Full
24	2,562.00	0.072	0.072	2,556.59	Not Full
26	2,572.00	0.303	0.303	2,566.58	Not Full
28	2,600.00	0.351	0.351	2,594.53	Not Full
30	2,608.00	0.189	0.189	2,601.56	Not Full
32	2,621.00	0.000	0.000	2,610.55	Not Full
34	2,624.50	0.240	0.240	2,618.77	Not Full
36	2,626.00	0.777	0.777	2,620.51	Not Full
38	2,628.00	0.228	0.228	2,616.54	Not Full



## Golden Valley South Sewer System - Peak Hour Manhole Report

ID	Rim Elevation (ft)	Base Flow (mgd)	Total Flow (mgd)	Grade (ft)	Status
40	2,494.00	0.000	0.000	2,487.78	Not Full
42	2,491.00	0.000	0.000	2,484.85	Not Full
44	2,489.00	0.366	0.366	2,478.91	Not Full
46	2,476.00	0.000	0.000	2,470.77	Not Full
48	2,470.00	0.000	0.000	2,464.88	Not Full
50	2,468.00	0.537	0.537	2,461.04	Not Full
52	2,515.00	2.700	2.700	2,509.71	Not Full
56	2,478.00	0.201	0.201	2,468.90	Not Full
58	2,458.00	0.153	0.153	2,450.95	Not Full
60	2,450.00	0.204	0.204	2,439.06	Not Full
62	2,436.00	0.102	0.102	2,427.87	Not Full
64	2,432.00	0.282	0.282	2,423.36	Not Full
66	2,427.00	0.084	0.084	2,417.27	Not Full
70	2,563.00	0.486	0.486	2,557.38	Not Full
72	2,556.00	0.000	0.000	2,550.33	Not Full
74	2,542.00	0.000	0.000	2,536.35	Not Full
76	2,522.00	2.700	2.700	2,516.71	Not Full
78	2,510.00	0.000	0.000	2,504.75	Not Full
80	2,500.00	0.000	0.000	2,494.82	Not Full
82	2,498.00	0.000	0.000	2,492.02	Not Full
86	2,622.00	0.117	0.117	2,610.15	Not Full
90	2,590.00	0.369	0.369	2,584.31	Not Full
92	2,575.00	0.435	0.435	2,569.52	Not Full
94	2,572.00	0.225	0.225	2,564.49	Not Full
96	2,562.00	0.000	0.000	2,556.51	Not Full
98	2,554.00	0.000	0.000	2,548.49	Not Full

**Golden Valley South Sewer System - Peak Hour Outlet Report**

<b>ID</b>	<b>Flow (mgd)</b>	<b>Grade (ft)</b>
150	23.094	2,404.27

# GVR South Sewer System Model

## Average Day Contributions

## Golden Valley South Sewer System - Average Day Pipe Report

ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Total Flow (mgd)	Velocity (ft/s)	d/D
101	104	108	10	1,101	0.020	0.348	4.270	0.282
103	108	110	12	931	0.013	0.436	3.826	0.276
105	110	112	12	1,032	0.012	0.436	3.688	0.283
107	112	100	12	1,509	0.015	0.436	4.060	0.264
109	100	114	18	1,654	0.013	0.818	4.378	0.220
11	10	12	21	1,783	0.008	1.703	4.487	0.293
111	114	82	18	2,106	0.011	0.818	4.147	0.229
113	82	116	21	2,462	0.006	1.718	4.104	0.314
115	116	118	21	1,432	0.007	1.785	4.357	0.310
117	118	120	21	1,512	0.007	1.785	4.424	0.306
119	120	122	24	2,718	0.011	2.761	5.811	0.284
121	122	150	24	2,554	0.008	2.914	5.245	0.318
123	124	126	8	669	0.009	0.065	2.022	0.200
125	126	128	8	831	0.012	0.124	2.706	0.257
127	128	130	8	733	0.014	0.124	2.831	0.249
129	130	132	10	816	0.005	0.187	2.163	0.294
13	12	158	21	3,566	0.006	1.808	4.250	0.318
131	132	134	10	1,269	0.013	0.187	3.031	0.231
133	134	136	18	2,983	0.008	0.502	3.275	0.192
135	136	120	18	5,260	0.010	0.901	4.172	0.244
137	138	140	8	1,157	0.005	0.052	1.562	0.205
139	140	142	8	1,331	0.009	0.128	2.466	0.281
141	142	144	10	1,302	0.011	0.200	2.918	0.249
143	144	136	10	1,394	0.012	0.271	3.333	0.281
145	146	108	8	964	0.004	0.088	1.679	0.283
147	152	154	8	4,220	0.004	0.058	1.505	0.227
149	158	154	21	3,151	0.009	1.868	4.750	0.301
15	14	12	8	1,342	0.004	0.036	1.247	0.186
151	156	158	8	1,734	0.004	0.060	1.490	0.234
153	74	52	10	3,095	0.009	0.162	2.549	0.236
155	154	160	24	2,411	0.006	2.152	4.252	0.297
157	160	162	24	3,143	0.005	2.322	4.046	0.326
159	162	150	24	2,805	0.004	2.322	3.893	0.335
161	164	122	10	2,045	0.005	0.117	1.890	0.232
163	166	114	8	3,052	0.009	0.000	0.000	0.000
17	18	16	18	1,524	0.009	0.934	3.947	0.260
171	174	56	15	1,574	0.011	1.133	4.707	0.343
173	52	174	15	1,503	0.015	1.062	5.137	0.307
175	176	154	8	1,821	0.004	0.098	1.767	0.294
177	178	180	12	5,302	0.012	0.490	3.886	0.297
179	180	182	18	3,501	0.009	1.142	4.335	0.281
183	182	10	21	4,662	0.004	1.632	3.433	0.345
19	20	18	18	1,276	0.008	0.817	3.684	0.249
21	22	20	15	2,093	0.011	0.758	4.079	0.284
23	24	22	15	1,256	0.013	0.720	4.302	0.264
25	26	24	15	782.356	0.013	0.696	4.270	0.259
27	28	26	15	2,132	0.013	0.595	4.118	0.238
29	30	28	12	650.207	0.011	0.478	3.681	0.303
31	32	30	12	1,050	0.009	0.415	3.261	0.299
33	34	32	8	1,005	0.008	0.080	2.104	0.225



## Golden Valley South Sewer System - Average Day Pipe Report

ID	From ID	To ID	Diameter (in)	Length (ft)	Slope	Total Flow (mgd)	Velocity (ft/s)	d/D
35	36	38	12	936.292	0.004	0.259	2.223	0.280
37	38	32	12	1,037	0.006	0.335	2.666	0.296
39	16	40	18	823.842	0.010	0.934	4.137	0.252
41	40	42	18	683.463	0.006	0.934	3.453	0.287
43	42	44	18	1,343	0.004	0.934	3.134	0.307
45	44	46	18	1,708	0.005	1.056	3.298	0.324
47	46	48	18	738.285	0.008	1.056	4.018	0.281
49	48	50	18	775.665	0.005	1.056	3.415	0.316
55	56	50	15	821.204	0.010	1.200	4.512	0.369
57	50	58	24	1,162	0.009	2.435	5.064	0.287
59	58	60	24	959.994	0.013	2.486	5.826	0.263
61	60	62	24	1,273	0.009	2.554	5.225	0.290
63	62	64	24	1,054	0.004	2.588	4.008	0.355
65	64	66	24	1,282	0.005	2.682	4.185	0.353
67	66	150	24	2,252	0.006	2.710	4.525	0.336
69	70	72	10	1,089	0.006	0.162	2.287	0.255
71	72	74	10	1,331	0.011	0.162	2.723	0.225
75	76	78	15	1,089	0.011	0.900	4.353	0.307
77	78	80	15	1,066	0.009	0.900	4.108	0.320
79	80	82	15	427.611	0.007	0.900	3.700	0.346
85	86	90	10	1,864	0.014	0.039	1.973	0.105
87	90	92	10	1,167	0.013	0.162	2.926	0.214
89	92	94	12	898.058	0.006	0.307	2.566	0.286
91	94	96	12	772.949	0.010	0.382	3.407	0.273
93	96	98	12	880.279	0.009	0.382	3.251	0.282
95	98	100	12	1,217	0.011	0.382	3.445	0.271
97	102	104	10	736.805	0.004	0.178	1.996	0.301

## Golden Valley South Sewer System - Average Day Manhole Report

ID	Rim Elevation (ft)	Base Flow (mgd)	Total Flow (mgd)	Grade (ft)	Status
10	2,524.00	0.071	0.071	2,508.51	Not Full
100	2,541.00	0.000	0.000	2,535.33	Not Full
102	2,611.00	0.178	0.178	2,605.25	Not Full
104	2,610.00	0.170	0.170	2,604.24	Not Full
108	2,592.00	0.000	0.000	2,582.28	Not Full
110	2,576.00	0.000	0.000	2,570.28	Not Full
112	2,564.00	0.000	0.000	2,558.26	Not Full
114	2,520.00	0.000	0.000	2,514.34	Not Full
116	2,480.00	0.067	0.067	2,476.54	Not Full
118	2,472.00	0.000	0.000	2,466.54	Not Full
12	2,506.00	0.069	0.069	2,494.56	Not Full
120	2,461.00	0.075	0.075	2,455.57	Not Full
122	2,430.00	0.036	0.036	2,424.64	Not Full
124	2,586.00	0.065	0.065	2,580.13	Not Full
126	2,580.00	0.059	0.059	2,574.17	Not Full
128	2,570.00	0.000	0.000	2,564.17	Not Full
130	2,560.00	0.063	0.063	2,554.25	Not Full
132	2,556.00	0.000	0.000	2,550.19	Not Full
134	2,540.00	0.315	0.315	2,534.29	Not Full
136	2,515.00	0.128	0.128	2,509.37	Not Full
138	2,562.00	0.052	0.052	2,556.14	Not Full
14	2,501.00	0.036	0.036	2,499.12	Not Full
140	2,558.00	0.076	0.076	2,552.19	Not Full
142	2,546.00	0.072	0.072	2,540.21	Not Full
144	2,532.00	0.071	0.071	2,526.23	Not Full
146	2,592.00	0.088	0.088	2,586.19	Not Full
152	2,468.00	0.058	0.058	2,462.15	Not Full
154	2,456.00	0.128	0.128	2,444.60	Not Full
156	2,484.00	0.060	0.060	2,478.16	Not Full
158	2,478.00	0.000	0.000	2,471.53	Not Full
16	2,501.00	0.000	0.000	2,495.38	Not Full
160	2,436.00	0.170	0.170	2,430.65	Not Full
162	2,420.00	0.000	0.000	2,415.67	Not Full
164	2,440.00	0.117	0.117	2,434.19	Not Full
166	2,548.00	0.000	0.000	2,542.00	Not Full
174	2,492.00	0.071	0.071	2,486.43	Not Full
176	2,457.00	0.098	0.098	2,452.20	Not Full
178	2,630.00	0.490	0.490	2,624.30	Not Full
18	2,514.00	0.117	0.117	2,508.39	Not Full
180	2,565.00	0.652	0.652	2,559.42	Not Full
182	2,533.00	0.490	0.490	2,526.60	Not Full
20	2,524.00	0.059	0.059	2,518.37	Not Full
22	2,546.00	0.038	0.038	2,540.36	Not Full
24	2,562.00	0.024	0.024	2,556.33	Not Full
26	2,572.00	0.101	0.101	2,566.32	Not Full
28	2,600.00	0.117	0.117	2,594.30	Not Full
30	2,608.00	0.063	0.063	2,601.30	Not Full
32	2,621.00	0.000	0.000	2,610.30	Not Full
34	2,624.50	0.080	0.080	2,618.65	Not Full
36	2,626.00	0.259	0.259	2,620.28	Not Full
38	2,628.00	0.076	0.076	2,616.30	Not Full

## Golden Valley South Sewer System - Average Day Manhole Report

ID	Rim Elevation (ft)	Base Flow (mgd)	Total Flow (mgd)	Grade (ft)	Status
40	2,494.00	0.000	0.000	2,487.43	Not Full
42	2,490.00	0.000	0.000	2,484.46	Not Full
44	2,489.00	0.122	0.122	2,478.49	Not Full
46	2,476.00	0.000	0.000	2,470.42	Not Full
48	2,470.00	0.000	0.000	2,464.47	Not Full
50	2,470.00	0.179	0.179	2,460.57	Not Full
52	2,515.00	0.900	0.900	2,509.38	Not Full
56	2,478.00	0.067	0.067	2,468.46	Not Full
58	2,458.00	0.051	0.051	2,450.53	Not Full
60	2,450.00	0.068	0.068	2,438.58	Not Full
62	2,436.00	0.034	0.034	2,427.21	Not Full
64	2,432.00	0.094	0.094	2,422.71	Not Full
66	2,427.00	0.028	0.028	2,416.67	Not Full
70	2,563.00	0.162	0.162	2,557.21	Not Full
72	2,556.00	0.000	0.000	2,550.19	Not Full
74	2,542.00	0.000	0.000	2,536.20	Not Full
76	2,522.00	0.900	0.900	2,516.38	Not Full
78	2,510.00	0.000	0.000	2,504.40	Not Full
80	2,500.00	0.000	0.000	2,494.43	Not Full
82	2,498.00	0.000	0.000	2,491.55	Not Full
86	2,622.00	0.039	0.039	2,610.09	Not Full
90	2,590.00	0.123	0.123	2,584.18	Not Full
92	2,575.00	0.145	0.145	2,569.29	Not Full
94	2,572.00	0.075	0.075	2,564.27	Not Full
96	2,562.00	0.000	0.000	2,556.28	Not Full
98	2,554.00	0.000	0.000	2,548.27	Not Full

**Golden Valley South Sewer System - Average Day Outlet Report**

<b>ID</b>	<b>Flow (mgd)</b>	<b>Grade (ft)</b>
150	7.95	2,403.67



## Appendix F

### Facility Phasing

## Phasing Plan for Water Facilities

Facility phasing for the Golden Valley Ranch water system was prepared to provide a model for system development. The Phasing Plan, presented in Appendix A, identifies each of the seven phases and the parcels within each phase. From this plan, water demands were calculated per phase and the infrastructure required to support the phase were determined. This information is presented in tabular format on each phasing figure. There are eight phasing figures following this document.

Each system phase was hydraulically modeled using MWH Soft's, H2OMap Water. The model results are presented graphically on output maps, which follow each phasing figure. All system models, for each phase, indicate acceptable pressures within the development.

Phase 1A is the initial development of GVR. The parcels included in the phase are located in each of the three pressure zones. The required infrastructure for Phase 1A includes a 1.0-MG tank and two wells. This system, as depicted on the Phase 1A figure, is the initial infrastructure for the 2750 pressure zone. The parcels scheduled for service in Phase 1A extend into both the 2850 and 2650 pressure zones. A pressure reducing station will be required to extend service into the 2650 zone, and the 2850 zone will meet minimum pressures while being connected to the 2750 zone system. The 2850/2750 zone interconnection will be converted to a pressure reducing station in Phase 1B.

Phase 1B requires a significant amount of additional infrastructure to be constructed. The 2850 zone system is planned to come online with 1.2 MG storage capacity and two wells. Two additional wells and two 1.0 MG tanks are required for the 2750 zone which finalizes the 2750 North system. The 2650 zone continues to be serviced from the 2750 zone through a PRV.

Phase 2 requires a pressure reducing station from the 2850 zone to improve the residual pressure in the upper end of the 2750 pressure zone during high demand scenarios such as peak hour and fire events.

Phase 3 requires the construction of the 2650 South system, which includes two 1.0-MG tanks and three wells. Additional storage capacity is required for both the 2750 and 2850 zone systems. The pressure reducing station installed in phase 1A to service the 2650 zone should be adjusted to only become active during excessive pressure loss (i.e. reliability connection). A booster station from the 2650 South reservoir may be required to improve pressure in the 2850 zone during high demand events.

Phase 4 requires building the 2750 South system. The 2750 South reservoir site is to be constructed and will be supplied by a pump station to be constructed at the 2650 South reservoir site. The pressure reducing station, providing pressure to the 2750 zone during high flow scenarios, should be adjusted to only become active during emergencies. In this phase, all pressure zones operate independent of each other with reliability connections through pressure reducing stations. Additional storage is required in both the 2650 and 2850 zone systems.

Phase 5 infrastructure includes the 2650 north reservoir site. The site will be served by two wells. Phases 6 and 7 require both additional storage and wells. At completion of phase 7, all Golden Valley Ranch Master Planned Community parcels are serviceable. Additional infrastructure may be required to serve offsite parcels included in this system plan.